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CALIFORNIA EARTH SCIENCE CORPORATION

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MONTHLY PROGRESS REPORT NO. 7
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Fault Tectonics and Earthquake Hazards in the Peninsular
Ranges, Southern California, EREP Investigation 463

NASA, Ames Research Center
Mail Code 241-1
Moffett Field, CA 94035

Attention: Mr. Gabriel Fox
Contracting Officer

Gentlemen:

California Earth Science Corporation (CalESCO) is pleased to submit its 7th
Monthly Progress Report on the application of Skylab imagery to analysis of
fault tectonics and earthquake hazards in the Peninsular Ranges, southern
California under NASA Contract No. NAS 2-7698.

Summary Outlook

The principal plans for the immediate future are to continue analysis of images
from SL1/SL2. The milestone plan provides a time-oriented schedule of the entire
effort to be performed.

Significant Progress

1. Two pseudocolor transformations have been made of portions of image 114-06
(Salton Sea area).
2. A pseudocolor transformation has been made of image 111-06 (San Andreas-
Garlock intersection).
3. Elevations of the water table in Coachella Valley were obtained
from the Water Resources Division, U.S. Geological Survey, Garden Grove, Ca.
4. Discussions were held with Mr. Paul Morton, California Division of Mines
and Geology, to coordinate efforts and obtain current information on active
faults in Orange County.

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EARTHQUAKE HAZARDS IN THE PENINSULAR
RANGES, SOUTHERN CALIFORNIA Monthly
Progress (California Earth Science Corp.,
Santa Monica)

January 5, 1974

5. Six man-days were spent in the field to check out possible westward extensions of the Victory Pass and Substation faults in the Eagle Mountains, Riverside County, suggested by Skylab imagery. We were unable to trace the Substation fault west of where it is shown on existing maps.

The Victory Pass fault was traced in the field to about one mile west of its termination on the State Geologic Map, but not as far west as the Skylab image suggested.

Expected Accomplishments

1. Plans for the immediate future include the creation of additional pseudo-color transformations of the Salton Sea image and of a red/green subtraction of that image. Work on the programs for processing SO-192 tapes has been deferred until the arrival of the tapes.
2. A light-aircraft flight over the central and southern Peninsular Ranges is planned for January, weather permitting.
3. Work on two technical reports will be continued. One is a compilation of all background information collected on major faults in southern California, and the other is an analysis of Frame 114 (Salton Sea area).
4. Analysis of SL1/SL2 imagery will be continued.
5. Supporting studies will be continued.

Travel Summary and Plans

Dr. D. L. Lamar attended the ERTS Symposium in Washington, D.C., Dec. 10-13 on other business but conferred with other Skylab investigators in attendance. Field checks of faults imaged in SL1/SL2 will continue during January.

Very truly yours,

CALIFORNIA EARTH SCIENCE CORPORATION

Paul M. Merifield

Paul M. Merifield, Ph.D.
Principal Investigator

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